REMARKS

In response to the Office Action mailed January 5, 2007, Claims 1-33 stand pending. Claims 15 and 28-33 have been withdrawn pursuant to restriction requirement. Claims 1-14 and 16-27, directed to MHC class II peptides, stand rejected. Claim 16 has been cancelled. Claims 1-3, 5-6, 10-11, 13-14, 20-22 and 27 have been amended. Support for amended claims 1-3, 5-6, 10-11, 13-14, 20-22 and 27 can be found generally throughout the specification and specifically within paragraphs 29 and 34-43, 106, as well as within original claim 5, and pursuant to restriction election requirement. No new matter has been added by virtue of these amendments.

Claim Rejections

A. 35 USC 112, first paragraph

1. Claims 1, 13, 14 and 27 stand rejected for alleged indefiniteness under 35 USC 112, first paragraph with regard to the term "femtomolar". Applicants respectfully traverse.

Applicants note that the term "femtomolar" is described and defined with paragraph 29 of the specification, with a specific detailed range of about 16 to about 320 femtomoles further defined. Claims 1, 13, 14 and 27, as currently amended, reflect this femtomolar range. Accordingly, Applicants respectfully submit that the 112, first paragraph rejection has thus now been obviated and therefore should be withdrawn.

2. Claims 6, 22 and 27 stand rejected for alleged indefiniteness under 35 USC 112, first paragraph with regard to the term "diluted' in the phrase "diluted acid". Applicants respectfully traverse.

Applicants note that the term "diluted" or "diluted acid" is defined in paragraph 41 of the specification, with three specific diluted acids mentioned (diluted acetonitrile, diluted acetic acid and diluted trifluoro acetic acid) as per concentrations known in and

cited in the art. Furthermore, in paragraph 106 of the specification, a specific concentration (0.1%) is given as an example of the diluted acid trifluoro acetic acid.

Applicants have amended claims 6 and 22 to reflect the three diluted acids mentioned in paragraph 41 of the specification, with claim 27 claiming only one of said three diluted acids. As the amount/concentration of said diluted acids is well known in and cited in the referenced art, Applicants respectfully posit that one of ordinary skill in the art would be appraised of the scope of Applicants' invention. Accordingly, Applicants respectfully submit that the 112, first paragraph rejection has thus now been obviated and therefore should be withdrawn.

B. 35 USC 102(b)

1. Claims 1-2, 6-12, 14, 16, 19, 20 and 22-26 stand rejected under 35 USC 102(b) as allegedly anticipated by Kalbacher et al (J. Chromatography [1991] 548:343-350). Applicants respectfully traverse.

Kalbacher is asserted to teach isolation of antigenic peptides from human HLA-DR MHC class II molecules in femtomolar amounts via elution of a HLA-DR molecule-synthetic influenza peptide matrix after immunoaffinity purification, subsequent ultrafiltration, and then co-incubation with the potential antigenic peptides and subsequent acid elution of the HLA-DR molecules. The Examiner asserts that said method anticipates and discloses each and every step of Applicants' method. Applicants respectfully traverse.

Applicants note that the method of Kalbacher more specifically allegedly discloses the isolation of HLA-DR molecules which are then contacted with synthetic influenza matrix peptides. The HLA-DR molecules are purified with immunoaffinity and then eluted. Subsequently the buffer and detergent were exchanged by ultrafiltration. The isolated HLA-DR molecules are then co-incubated with potential antigenic peptides and the peptides bounded by the HLA_DR molecules are then isolated with addition of

acid. Therefore Kalbacher requires and teaches a first elution of the HLA-DR molecule-synthetic matrix peptide complex and then, after ultrafiltration and co-incubation, requires and teaches a second elution wherein the potential antigenic peptides are eluted from the molecules via acid.

In contrast, Applicant's method only requires one elution step and additionally comprises a washing step of the sequestered peptide receptor (MHC class II molecule)-antigenic peptide beaded complex. Kalbacher does not teach nor disclose this method, but instead requires two elution steps and does not provide a washing of the beaded peptide receptor-antigenic peptide complex. Accordingly, Applicants respectfully submit that Kalbacher does not anticipate Applicants claimed invention.

Applicants therefore respectfully submit that the 102(b) rejection has been overcome and that said rejection as to claims 1-2, 6-12, 14, 16, 19, 20 and 22-26, as amended, should be withdrawn and said claims put into condition for allowance.

2. Claims 1-3, 6-12, 14, 16, 19, 20 and 22-26 stand rejected under 35 USC 102(b) as allegedly anticipated by Chicz et al (J. Exp. Med. [1993] 178:27-47). Applicants respectfully traverse.

Chicz is alleged to teach the isolation of antigenic peptides from human HLA-DR MHC class II molecules involving, inter alia, elution of the peptide-molecule complex via immunoaffinity precipitation and a subsequent elution of the peptides with acid (10% acetic acid). The Examiner asserts that said method anticipates and discloses each and every step of Applicants' claimed method. Applicants respectfully traverse.

Applicants first point out that Chicz et al allegedly discloses a method comprising immunoaffinity purifying the complexes, a first elution step of eluting the complexes, followed by concentrating and washing the complexes, and then a second elution step, wherein the antigenic peptides are eluted with 10% acetic acid, followed by subsequent

washing and concentrating the peptides again. Chicz, like Kalbacher, thus requires two elution steps. Applicants' claimed invention only requires one elution step.

Additionally, Chicz does not teach isolating antigenic peptides in femtomolar amounts. Indeed, the method of Chicz requires the presence of 1 mg of protein in order to get enough peptides for sequencing. Applicants' method of Claims 1 and 2 in contrast is an amount of 0.1 to 5 µg. The method of Chicz requires more starting material; the method of Applicants' invention has a much lower material loss and thus allows a much smaller amount to start with.

Accordingly, Applicants respectfully submit that Chicz does not anticipate Applicants claimed invention. Applicants therefore respectfully submit that the 102(b) rejection has been overcome and that said rejection as to claims 1-3, 6-12, 14, 16, 19, 20 and 22-26, as amended, should be withdrawn and said claims put into condition for allowance.

C. 35 USC 103(a)

1. Claims 4, 17 and 18 stand rejected under 35 USC 103(a) as being unpatentable over Chicz et al (J. Exp. Med. [1993] 178:27-47) as applied to claims 2 and 16 above and further in view of Arndt et al (EMBO J. [2000] 19(6):1241-1251). Applicants respectfully traverse.

Chicz is alleged to disclose a general method for eluting and identifying peptide antigens from MHC Class II cells. The Examiner acknowledges that Chicz does not teach dendritic cells. Arndt is alleged to teach immunopurification of peptide-containing MHC Class II complexes from dendritic cells. The Examiner alleges it would have been obvious to use the dendritic cells of Arndt in the method of Chicz. Applicants respectfully traverse.

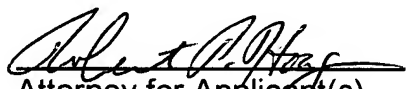
followed by concentrating and washing the complexes, and then a second elution step, wherein the antigenic peptides are eluted with 10% acetic acid, followed by subsequent washing and concentrating the peptides again. Chicz thus requires two elution steps. Applicants' claimed invention only requires one elution step.

The addition of Arndt does not remedy the teaching of Chicz. Indeed, Arndt disclose the immunoprecipitation of complexes from B cells, washing with washing buffer and eluting the complexes. The antigenic peptides of Arndt are not eluted. Thus, Arndt requires the first elution step of Chicz but not the second elution step. Applicants' invention has only one elution step and that elution step involves the elution of the peptides. Arndt fails to teach Applicant's elution step. Arndt instead reinforces the first elution step of Chicz, which said elution is not a part of Applicant's invention.

Thus, even presuming *arguendo* that one had the motivation to combine Arndt with Chicz, the combined methodology would not disclose or teach Applicants' method. Accordingly, Applicants respectfully submit that the 103(a) rejection has been obviated and overcome and that said rejection as to claims 4, 17 and 18 should be withdrawn and said claims put into condition for allowance.

No further fee is required in connection the filing of this Amendment. If any additional fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,



Attorney for Applicant(s)
Robert P. Hoag
(Reg. No. 39712)
340 Kingsland Street
Nutley, NJ 07110
Telephone (973) 235-4453
Telefax: (973) 235-2363

290278